# IP MULTICAST PACKET BURST ABSORPTION AND MULTITHREADED REPLICATION ARCHITECTURE

## ABSTRACT OF THE DISCLOSURE

Systems and methods for IP multicast packet burst absorption and multithreaded replication architecture are disclosed. Replications of IP multicast packets are performed in a control plane of a network device. The network device may include a data plane for transmitting data between ingress and egress ports and a control plane including a shared transmit/receive queue infrastructure configured to queue incoming multicast packets to be replicated on a per ingress port basis and to queue transmit packets, and a multicast processing engine in communication with the shared queue infrastructure and including a circular replication buffer to facilitate multithreaded replication of multicast packets on a per egress virtual local area network (VLAN) replication basis. The shared transmit/receive queue infrastructure may dynamically allocate memory between the transmit and receive multicast queues.